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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/799561 Confirmation No. 7778
Applicant : Chikara Sugai et al.
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Examiner : Yaritza Guadalupe-McCall

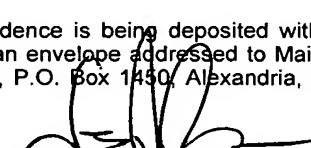
Title : DISPLACEMENT MEASURING INSTRUMENT
Docket No. : KIN-15384
Customer No. : 040854

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPELLANTS' BRIEF (37 CFR § 43.37)

This brief is submitted in triplicate. A check in the amount of \$500.00 is enclosed to cover the fee referenced in 37 CFR § 41.20(b)(2). If any additional fees are due for this filing, please charge such additional required fees to our Deposit Account No. 18-0160, our order No. KIN-15384.

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This brief contains the items under the following headings in the order set forth below:

- I. REAL PARTY IN INTEREST
- II. RELATED APPEALS AND INTERFERENCES
- III. STATUS OF CLAIMS
- IV. STATUS OF AMENDMENTS
- V. SUMMARY OF CLAIMED SUBJECT MATTER
- VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL
- VII. ARGUMENTS
- VIII. CLAIMS APPENDIX
- IX. EVIDENCE APPENDIX (none)
- X. RELATED PROCEEDINGS APPENDIX (none)

I. REAL PARTY IN INTEREST

MITUTOYO CORPORATION, having a place of business at 20-1, Sakado 1-chome, Takatsu-ku, Kawasaki-shi, Kanagawa 213-8533, Japan is the real party in interest and the assignee of all right, title, and interest to the invention throughout the world. An assignment from inventors Chikara Sugai and Toshiyuki Shinohara has been recorded with the United States Patent and Trademark Office and can be found at Reel 014449 and Frame 0669.

II. RELATED APPEALS AND INTERFERENCES

Applicant does not know of any related appeals and/or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

A. Total Number of Claims in Application

Four (4) claims are currently pending in this application.

B. Status of the Claims

1. Claims previously canceled: None.
2. Claims withdrawn from consideration but not cancelled: None.
3. Claims pending: 1-4.
4. Claims allowed: None.
5. Claims rejected: Claims 1-4.
6. Claims objected to: None.
7. Claims indicated as allowable if the § 112 rejections are overcome: None.

C. Claims on Appeal

The claims on appeal are: Claims 1-4.

IV. STATUS OF AMENDMENTS

A Response to the Final Office Action of March 2, 2005 was filed on April 26, 2005. The Examiner has indicated in an Advisory Action dated May 13, 2005 that the Response did not place the application in condition for allowance because, in the Examiners opinion, the proposed amendments raise new issues that would require further consideration and/or search, and they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal. The Response to the Final Office Action of March 2, 2005 proposed changes to the pending claims.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The presently claimed invention relates to a displacement measuring instrument having a dial gauge and a manually operable lifting lever, where a spindle is forcibly shifted by the lifting lever. The dial gauge has a gauge body (i.e. a measuring instrument body). The spindle penetrates the gauge body to be slidable in the longitudinal direction thereof. (*Specification, page 5, lines 20 - page 6, line 1*) The lifting lever has the drive end and a manual end opposite thereto. (*Specification, page 6, lines 7-8*) In about the middle section between the drive end and the manual end, the lifting lever is swingably supported by a lever support and an engaging member. (*Specification, page 6, lines 14-16*)

The lever support is fixed to the engaging member. The engaging member is provided on the outer circumference of the gauge body, to be engaged with the lever support, e.g. with a projection extending along the outer circumference to be engaged with e.g. a dovetail groove. (*Specification, page 7, lines 2-5*) The engaging member is integrated with the gauge body by, for instance, die-casting. Alternatively, the engaging member may be formed independent of the gauge body and fixed on the gauge body by welding, etc. In this way, the engaging member is provided on the outer circumference of the instrument body without boring the outer circumference. In order to engage the lever support with the engaging member, the dovetail groove of the lever support is inserted to the projection of the engaging member and is slid by the length of the projection. (*Specification, page 7, lines 6-11*) In this way, the engaging member is detachable from the lever support.

A detachment stopper for preventing the lever support from being detached from the engaging member when the lever support is engaged with the engaging member is provided on an end of the engaging member on the side of the manual end of the lifting lever. (*Specification, page 7, lines 12-15*) Further, the lever support is preferably made of a synthetic resin molding. (*Specification, page 7, lines 2-11*)

VI. GROUNDS OF REJECTION

1. Claims 1-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,421,101 to Rank in view of U.S. Patent No. 5,450,909 to Stevenson.
2. Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,421,101 to Rank in view of U.S. Patent No. 5,450,909 to Stevenson as applied to claims 1-3, and further in view of U.S. Patent No. 6,187,242 to Onoda.

VII. Arguments

A. The Rejection of Claims 1-3 under 35 U.S.C. §103(a) as being unpatentable over Rank in view of Stevenson.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103, the cited references must teach each and every claim limitation or elements of the rejected claims. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The rejection of independent claim 1 and dependent claims 2 and 3 is in error and should be reversed, because each and every limitation of

the claimed invention is not taught or suggested by the combination of Rank in view of Stevenson.

Group I: Claim 1

Neither Rank nor Stevenson, taken alone or in combination, can be relied upon to show a displacement measuring instrument having “an engaging member provided on an outer circumference of the instrument body that detachably engages and supports the lever support,” as required by independent claim 1.

1. Rank fails to show a distinct “engaging member” as claimed.

Rank discloses a type of crimp measuring gauge device having a spindle 12, a spindle lift handle 15 including a lift leg 305 and a thumb lever 250 that pivots about a fulcrum 300. It is clear from Fig. 1 of Rank that the fulcrum 300 is connected directly to the gauge 18. If Rank’s fulcrum 300 could be interpreted as a type of “lever support,” therefore Rank cannot be construed as showing an intervening “engaging member” that “detachably engages and supports the lever support” as required by claim 1.

2. Rank does not show an engaging member on an “outer circumference” as claimed.

It is clear from inspection of Fig. 3 of Rank that the fulcrum 300 is connected to a back side of a gauge body 18. Therefore, even if Rank did disclose an “engaging member,” Rank could not be relied upon to show “an

engaging member provided on an outer circumference of the instrument body," as required by claim 1.

3. *Rank does not show an engaging member that "detachably" engages and supports the lever support as claimed.*

It was shown in the original specification and the Amendments that the present engaging member with detachable lever support is used to prevent minute dust particles from invading the instrument body, which affects the precision of the instrument, as illustrated in the present prior art Figs. 6 and 7. However, the Examiner has taken a dismissive approach toward this inventive feature, stating that "any structure may be considered to be 'detachably.'" Nonetheless, Rank fails to show a distinct "engaging member" on an "outer circumference" that "detachably" engages a distinct "lever support," as required by claim 1, so the Examiner's argument is moot.

4. *The Examiner has not shown how the combination with Stevenson supplies the stated deficiencies of Rank.*

Stevenson is directed to a removable grade determining and apparatus 10 that is supported by a mounting assembly 16. On page 3 of the Final Action, the Examiner simply states that "Rank does not discloses (sic) a lever support that supports an end of the lifting lever opposite to a drive end of the lifting lever that is in contact with the spindle as stated in claim 1." This passage goes on to discuss Rank's deficiencies with respect to claims 2 and 3. But at the top of page 4, the Examiner introduces Stevenson by stating, "Regarding to claims 1-3: Stevenson discloses a device having a mounting

assembly (16) having a dovetail arrangement including a support (54), etc."

While merely making passing reference to claim 1, the Examiner simply commences a discussion of the limitations recited in claims 2 and 3. The Examiner does not follow up to show how Stevenson supplies the previously-stated deficiency of Rank, namely "a lever support that supports an end of the lifting lever opposite to a drive end of the lifting lever that is in contact with the spindle" as had been indicated on page 3.

5. *A combination of Rank and Stevenson is unmotivated, would destroy the device and would still fail to meet the limitations of claim 1.*

On page 6, third line up, of the Final Action, the Examiner states that:

...Rank teaches a displacement measuring instrument having a lever (250) mounted to the instrument body (18) by a support and screws mechanism (300). Stevenson teaches an alternative means for securing a device to a structure, such as the use of a dovetail arrangement. Therefore, it is within the skill of an ordinary artisan to replace the means for securing used by Rank with the means for securing disclosed by Stevenson, since the use of the particular type of engaging members by Applicant is considered to be nothing more than the use of one of numerous and well known alternate types of engaging members for performing the same function, i.e., fasteners and connectors, and does not involve any inventive step."

However, it is not true that Applicant has simply used a well known alternate type of engaging member, as proposed by the Examiner. Stevenson is from a highly divergent, non-analogous area of technology. Other than associating Stevenson's "dove-tailed block member 32" with the present "engaging member," the Examiner has not proposed how the Rank device is to be modified to include this block member 32. Specifically, even if Stevenson could somehow be brought in for simply showing a "detachable" structure, it has not been explained how Stevenson could suggest moving Rank's "fulcrum 300" from the back of the instrument body 18 to the "outer

circumference," or why such a modification would be desirable, so as to satisfy the requirements of claim 1.

Further, if the basic configuration of Rank's device is to be somehow reconfigured as proposed, the Examiner has not explained how these extensive modifications are to be carried out without destroying the operability of the Rank device. There is no clearly apparent manner in which the fulcrum 300 and a spindle lift handle 15 including a lift leg 305 and a thumb lever 250 can be relocated as proposed, and still result in an operable device. Such arbitrary movement of parts would actually destroy the function of the Rank device. Indeed, extensive additional modification would be required to restore the combined device to operability, well beyond the disclosures of these references.

Like Rank, Stevenson fails to show a distinct "engaging member" on an "outer circumference" of an instrument body. So even if Rank and Stevenson could somehow be combined as proposed by the Examiner, the combination would still fail to result in a device having the limitations recited in claim 1. In view of the above, it is considered apparent that a *prima facie* case of obviousness has not been established for *Group I*.

Group II: Claims 2 and 3

Claims 2 and 3 depend from claim 1. As shown above, neither Rank nor Stevenson, taken alone or in combination, can be relied upon to show a displacement measuring instrument having "an engaging member provided on an outer circumference of the instrument body that detachably engages and supports the lever support," as required by independent claim 1. Since the

limitations of the base claim are not met by the proposed combination, the dependent claims patentably distinguish for at least the same reasons.

Claim 2 depends directly from claim 1. Claim 2 recites:

wherein the lever support and the engaging member are engaged by a dovetail arrangement including a groove formed on one of the lever support and the engaging member along the outer circumference of the measuring instrument body and a projection formed on the other of the lever support and the engaging member to be engaged with the groove.

While Stevenson does show a type of dovetail and groove arrangement, it was shown above that Stevenson fails to show a distinct “engaging member” on an “outer circumference” of an instrument body. So the proposed combination would still fail to result in a device having all the limitations required by claim 2.

Claim 3 depends directly from claim 2. Claim 3 recites:

wherein a detachment stopper that prevents the lever support from being detached from the engaging member when the lever support is engaged with the engaging member and is slid by a predetermined distance is provided on the engaging member.

While Stevenson does show a type of “stop member 62” that the Examiner reads onto the present detachment stopper, it was nevertheless shown above that Stevenson fails to show a distinct “engaging member” on an “outer circumference” of an instrument body. So the proposed combination would still fail to result in a device having all the limitations required by claim 3. In view of the above, it is considered apparent that a *prima facie* case of obviousness has not been established for *Group II*.

B. The Rejection of Claim 4 under 35 U.S.C. §103(a) as being unpatentable over Rank in view of Stevenson.

In order to establish a *prima facie* case of obviousness under 35 U.S.C. §103, the cited references must teach each and every claim limitation or elements of the rejected claims. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The rejection of dependent claim 4 is in error and should be reversed, because each and every limitation of the claimed invention is not taught or suggested by the combination of Rank in view of Stevenson, further in view of Onoda.

Group I: Claim 4

Claim 4 depends directly from claim 1. Claim 4 recites:
wherein the lever support is a synthetic resin molding.

While Onoda does show an incidental disclosure of a synthetic resin material, Onoda fails to supply the deficiencies of the base combination as applied against independent claim 1. Namely, Onoda fails to show a distinct “engaging member” on an “outer circumference” of an instrument body. So the proposed combination would still fail to result in a device having all the limitations required by claim 4. In view of the above, it is considered apparent that a *prima facie* case of obviousness has not been established for *Group I*.

Conclusion

The prior art rejections of the cited claims should be reversed because the cited reference does not disclose or suggest the invention recited in the claims. Specifically, the rejection of claims 1-3 under 35 U.S.C. § 103(a) as being obvious over Rank in view of Stevenson is in error. Also, the rejection

of claim 4 under 35 U.S.C. § 103(a) as being obvious over Rank in view of Stevenson, further in view of Onoda, is in error.

For the reasons set forth herein, the rejections of the claims 1-4 of the present application are in error and must be reversed.

Respectfully submitted,

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APPENDIX A

1. (Previously Presented) A displacement measuring instrument, comprising:
 - an instrument body;
 - a spindle penetrating the instrument body to be slidably supported by the instrument body to be displaced;
 - a lifting lever manipulated from the outside to forcibly shifting the spindle;
 - a lever support that supports an end of the lifting lever opposite to a drive end of the lifting lever that is in contact with the spindle; and
 - an engaging member provided on an outer circumference of the instrument body that detachably engages and supports the lever support.
2. (Original) The displacement measuring instrument according to claim 1, wherein the lever support and the engaging member are engaged by a dovetail arrangement including a groove formed on one of the lever support and the engaging member along the outer circumference of the measuring instrument body and a projection formed on the other of the lever support and the engaging member to be engaged with the groove.
3. (Original) The displacement measuring instrument according to claim 2,

wherein a detachment stopper that prevents the lever support from being detached from the engaging member when the lever support is engaged with the engaging member and is slid by a predetermined distance is provided on the engaging member.

4. (Original) The displacement measuring instrument according to claim

1,

wherein the lever support is a synthetic resin molding.